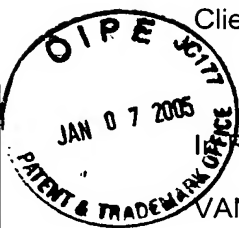


Ifw

Docket Number: 081468-0307331
Client Reference: P-1774.000-US

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In Re the Application of

VAN SANTEN et al.

Group Art Unit: 2851

Application No.: 10/743,271

Examiner: Unassigned

Filed: December 23, 2003

Confirmation No.: 4441

For: LITHOGRAPHIC APPARATUS AND DEVICE MANUFACTURING METHOD

January 7, 2005

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. 1.56, the attention of the Patent and Trademark Office is hereby directed to the following U.S. patent application(s):

Examiner's Initials	First Inventor	Application No.	Filing Date	Enclosed
	DUINEVELD et al. (081468-0308101)	10/773,461	02/09/2004	<input checked="" type="checkbox"/> Specification <input checked="" type="checkbox"/> Drawings <input checked="" type="checkbox"/> Other: stamped receipt card
	FLAGELLO et al. (081468-0302644)	10/698,012	10/31/2003	<input checked="" type="checkbox"/> Specification <input checked="" type="checkbox"/> Drawings <input checked="" type="checkbox"/> Other: stamped receipt card
	DIERICHS (081468-0308270)	10/775,326	02/11/2004	<input checked="" type="checkbox"/> Specification <input checked="" type="checkbox"/> Drawings <input checked="" type="checkbox"/> Other: stamped receipt card
	SUWA et al. (Reissue Application of U.S. Patent No. 6,191,429 B1)	10/367,910	02/19/2003	<input checked="" type="checkbox"/> Specification <input checked="" type="checkbox"/> Drawings <input type="checkbox"/> Other: stamped receipt card

*The Examiner's initials adjacent a citation indicates he/she has considered the cited application relative to the subject application.

It is respectfully requested that these applications and the art cited therein during examination be expressly considered during the prosecution of this application and be made of record in this application. The identification of the above U.S. patent applications is not to be construed as a waiver of secrecy as to those applications now or upon issuance of the present application as a patent.

PLEASE DO NOT PRINT the above information on the patent which results from this application.

Consideration of each listed application is earnestly solicited since unpublished patent applications are contemplated as IDS material; see the exception in Rule 98(a)(2)(iii) and note the penultimate sentence of MPEP 609.

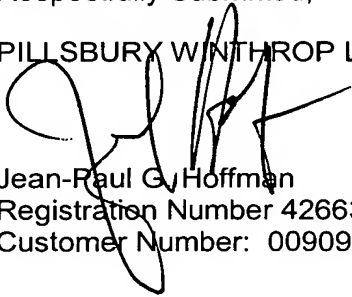
Further, in keeping with MPEP 609, subsec. C(2), 2nd para., line 10 to end of the paragraph (especially note lines 18-25) **PLEASE RETURN A COPY OF THIS LETTER** with the Examiner's initials adjacent each above listing so that applicant will know that each listed application has been considered as required by PTO policy.

Secondly, please consider each document which is listed on the attached Form PTO-1449 and return a copy of that form with the Examiner's initials adjacent each citation, a copy of each document enclosed except for any U.S. patents and published patent applications. It is respectfully requested that these documents listed on the Form PTO-1449 be expressly considered during the prosecution of this application, and that the documents be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is being filed before the mailing date of the first Office Action on the merits in the present application. No certification or fee is required.

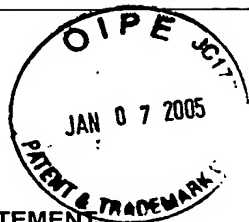
Respectfully Submitted,

PILLSBURY WINTHROP LLP



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Atty. Dkt. No.	M#	Client Ref.
	307331	P-1774.000-US

**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT**

Applicant: VAN SANTEN et al.	
Appln. No. 10/743,271	
Filing Date: December 23, 2003	
Examiner: Unknown	Group Art Unit: 2851

Date: January 7, 2005 Page 1 of 4

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
	AR	3,573,975	04/1971	DHAKA <i>et al.</i>	117	212	
	BR	3,648,587	03/1972	STEVENS	95	44	
	CR	4,346,164	08/1982	TABARELLI <i>et al.</i>	430	311	
	DR	4,390,273	06/1983	LOEBACH <i>et al.</i>	355	125	
	ER	4,396,705	08/1983	AKEYAMA <i>et al.</i>	430	326	
	FR	4,480,910	11/1984	TAKANASHI <i>et al.</i>	355	30	
	GR	4,509,852	04/1985	TABARELLI <i>et al.</i>	355	30	
	HR	5,040,020	08/1991	RAUSCHENBACH <i>et al.</i>	355	53	
	IR	5,121,256	06/1992	CORLE <i>et al.</i>	359	664	
	JR	5,610,683	03/1997	TAKAHASHI	355	53	
	KR	5,715,039	02/1998	FUKUDA <i>et al.</i>	355	53	
	LR	5,825,043	10/1998	SUWA	250	548	
	MR	5,900,354	05/1999	BATCHELDER	430	395	
	NR	6,191,429	02/2001	SUWA	250	548	

FOREIGN PATENT DOCUMENTS

		Document Number	Date MM/YYYY	Country	Inventor Name	English Abstract		Translation Readily Available	
						Enclosed	No	Enclosed	No
	OR	WO 99/49504	09/1999	PCT	FUKAMI <i>et al.</i>	X		X	
	PR	EP 0023231	02/1981	EUROPE	TABARELLI <i>et al.</i>	X			
	QR	EP 0418427	03/1991	EUROPE	MIYAKE	X		X	
	RR	EP 1039511	09/2000	EUROPE	MURAKAMI <i>et al.</i>	X		X	
	SR	DD 224448	07/1985	GERMANY	HESSE <i>et al.</i>		X		
	TR	DD 242880	02/1987	GERMANY	KUCH		X		
	UR	FR 2474708	07/1981	FRANCE	LETELLIER		X		
	VR	JP 62-065326	03/1987	JAPAN	MORIUCHI	X			
	WR	JP 62-121417	06/1987	JAPAN	NAKAZAWA	X			
	XR	JP 63-157419	06/1988	JAPAN	NAKASUJI	X			
	YR	JP 04-305915	10/1992	JAPAN	OZEKI <i>et al.</i>	X			
	ZR	JP 04-305917	10/1992	JAPAN	OZEKI <i>et al.</i>	X			
	AAR	JP 06-124873	05/1994	JAPAN	TAKAHASHI	X		X	

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

BBR	M. SWITKES et al., "Immersion Lithography at 157 nm", MIT Lincoln Lab, Orlando 2001-1, December 17, 2001			
CCR	M. SWITKES et al., "Immersion Lithography at 157 nm", J. Vac. Sci. Technol. B., Vol. 19, No. 6, November/December 2001, pp. 2353-2356			
DDR	M. SWITKES et al., "Immersion Lithography: Optics for the 50 nm Node", 157 Anvers-1, September 4, 2002			

Examiner: _____ Date Considered: _____

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449 (modified) To: U.S. Department of Commerce (PW FORM PAT-1449) Patent and Trademark Office					Atty. Dkt. No.	M#	Client Ref.	
					307331		P-1774.000-US	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT					Applicant: VAN SANTEN et al.			
					Appln. No. 10/743,271			
					Filing Date: December 23, 2003			
					Examiner: Unknown		Group Art Unit: 2851	
Date: January 7, 2005 Page <u>2</u> of <u>4</u>								
U.S. PATENT DOCUMENTS								
Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)	
	AR	6,560,032	05/2003	HATANO	359	656		
	BR	6,603,130	08/2003	BISSCHOPS <i>et al.</i>	250	492.1		
	CR	6,633,365	10/2003	SUENAGA	355	53		
	DR	2002/0163629	11/2002	SWITKES <i>et al.</i>	355	53		
	ER	2003/0123040	07/2003	ALMOGY	355	69		
	FR	2003/0174408	09/2003	ROSTALSKI <i>et al.</i>	359	642		
	GR	2004/0075895 A1	04/2004	LIN	359	380		
	HR	2004/0109237 A1	06/2004	EPPLER <i>et al.</i>				
	IR							
FOREIGN PATENT DOCUMENTS							English Abstract	
		Document Number	Date MM/YYYY	Country	Inventor Name	Translation Readily Available		
						Enclosed	No	
	JR	JP 07-220990	08/1995	JAPAN	FUKUDA <i>et al.</i>	X		
	KR	JP 10-228661	08/1998	JAPAN	KUROKAWA	X		
	LR	JP 10-255319	09/1998	JAPAN	SUENAGA <i>et al.</i>	X		
	MR	JP 10-303114	11/1998	JAPAN	SUWA	X	X	
	NR	JP 10-340846	12/1998	JAPAN	KUDO	X	X	
	OR	JP 2001-091849	04/2001	JAPAN	AIZAKI <i>et al.</i>	X		
	PR	JP 07-132262	05/1995	JAPAN	HIRAKAWA <i>et al.</i>	X		
	QR	JP 58-202448	11/1983	JAPAN	KAWAMURA <i>et al.</i>	X		
	RR	WO 2004/019128	03/2004	PCT	OMURA <i>et al.</i>	X	X	
	SR	WO 03/077037	09/2003	PCT	ROSTALSKI <i>et al.</i>	X	X	
	TR	WO 03/077036	09/2003	PCT	SCHUSTER	X		
	UR							
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	VR	B.J. LIN, "Drivers, Prospects and Challenges for Immersion Lithography", TSMC, Inc., September 2002						
	WR	B.J. LIN, "Proximity Printing Through Liquid", IBM Technical Disclosure Bulletin, Vol.20, No. 11B, April 1978, p. 4997						
	XR	B.J. LIN, "The Paths To Subhalf-Micrometer Optical Lithography", SPIE Vol. 922, Optical/Laser Microlithography (1988), pp. 256-269						
	YR	G.W.W. STEVENS, "Reduction of Waste Resulting from Mask Defects", Solid State Technology, August 1978, Vol.21 008, pp. 68-72						
	ZR	S. OWA <i>et al.</i> , "Immersion Lithography; its potential performance and issues", SPIE Microlithography 2003, 5040-186, February 27, 2003						
	AAR	S. OWA <i>et al.</i> , "Advantage and Feasibility of Immersion Lithography", Proc. SPIE 5040 (2003)						
Examiner					Date Considered:			
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.								

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					Filing Date: December 23, 2003					
					Examiner: Unknown		Group Art Unit: 2851			
Date: January 7, 2005					Page 3 of 4					
U.S. PATENT DOCUMENTS										
Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)		Class	Sub Class	Filing Date (if appropriate)		
	AR	6,236,634 B1	05/2001	LEE et al.		369	112			
	BR	2002/0020821 A1	02/2002	VAN SANTEN et al.		250	492			
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		Document Number	Date MM/YYYY	Country	Inventor Name		Enclosed	No	Enclosed	No
	CR	DD 206 607	02/1984	GERMANY	WESTPHAL et al.			X		
	DR	DD 221 563	04/1985	GERMANY	PFORR et al.			X		
	ER	JP 11-176727	07/1999	JAPAN	SHIRAISHI		X			
	FR	JP 2000-058436	02/2000	JAPAN	FUJISHIMA et al.		X			
	GR	WO 2004/053950 A1	06/2004	PCT	OWA		X			
	HR	WO 2004/053951 A1	06/2004	PCT	MAGOME et al.		X			
	IR	WO 2004/053952 A1	06/2004	PCT	MAGOME et al.		X			
	JR	WO 2004/053953 A1	06/2004	PCT	NEI et al.		X			
	KR	WO 2004/053954 A1	06/2004	PCT	NEI et al.		X			
	LR	WO 2004/053955 A1	06/2004	PCT	HIRUKAWA et al.		X			
	MR	WO 2004/053956 A1	06/2004	PCT	NAGASAKA et al.		X			
	NR	WO 2004/053957 A1	06/2004	PCT	HIDAKA et al.		X			
	OR	WO 2004/053958 A1	06/2004	PCT	MIZUTANI et al.		X			
	PR	WO 2004/053959 A1	06/2004	PCT	SHIRAI		X			
	QR	WO 2004/053596 A2	06/2004	PCT	GRAUPNER		X			
OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)										
	RR	Nikon Precision Europe GmbH, "Investor Relations – Nikon's Real Solutions", May 15, 2003								
	SR	H. KAWATA et al., "Optical Projection Lithography using Lenses with Numerical Apertures Greater than Unity", Microelectronic Engineering 9 (1989), pp. 31-36								
	TR	J.A. HOFFNAGLE et al., "Liquid Immersion Deep-Ultraviolet Interferometric Lithography", J. Vac. Sci. Technol. B., Vol. 17, No. 6, November/December 1999, pp. 3306-3309								
	UR	B.W. SMITH et al., "Immersion Optical Lithography at 193nm", FUTURE FAB International, Vol. 15, July 11, 2003								
	VR	H. KAWATA et al., "Fabrication of 0.2µm Fine Patterns Using Optical Projection Lithography with an Oil Immersion Lens", Jpn. J. Appl. Phys. Vol. 31 (1992), pp. 4174-4177								
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	XR									
	YR									
Examiner						Date Considered:				
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		Filing Date: December 23, 2003	
		Examiner: Unknown	Group Art Unit: 2851
Date: January 7, 2005 Page 4 of 4			

U.S. PATENT DOCUMENTS							
Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
	ZR	2004/0119954	06/2004	KAWASHIMA et al.	355	30	
	AAR	2004/0125351	07/2004	KRAUTSCHIK et al.	355	53	
	BBR						
	CCR						
	DDR						
	EER						
	FFR						
	GGR						

FOREIGN PATENT DOCUMENTS							English Abstract		Translation Readily Available	
		Document Number	Date MM/YYYY	Country	Inventor Name		Enclosed	No	Enclosed	No
	HHR	WO 2004/055803 A1	07/2004	PCT	VAN SANTEN		X		X	
	IIR	WO 2004/057589 A1	07/2004	PCT	NEIJZEN et al.		X		X	
	JJR	WO 2004/057590 A1	07/2004	PCT	VAN SANTEN et al.		X		X	
	KKR	JP 2004-193252	07/2004	JAPAN	Not Available		X			
	LLR									
	MMR									
	NNR									
	OOR									

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)										
	PPR	S. OWA et al., "Update on 193nm immersion exposure tool", Litho Forum, International SEMATECH, Los Angeles, January 27-29, 2004, Slide Nos. 1-51								
	QQR	H. HATA, "The Development of Immersion Exposure Tools", Litho Forum, International SEMATECH, Los Angeles, January 27-29, 2004, Slide Nos. 1-22								
	RRR	T. MATSUYAMA et al., "Nikon Projection Lens Update", SPIE Microlithography 2004, 5377-65, March, 2004								
	SSR	"Depth-of-Focus Enhancement Using High Refractive Index Layer on the Imaging Layer", IBM Technical Disclosure Bulletin, Vol. 27, No. 11, April 1985, p. 6521								
	TTR	A. SUZUKI, "Lithography Advances on Multiple Fronts", EEdesign, EE Times, January 5, 2004								
	UUR	B. LIN, "The k_3 coefficient in nonparaxial λ/NA scaling equations for resolution, depth of focus, and immersion lithography, <i>J. Microlith., Microfab., Microsyst.</i> 1(1):7-12 (2002)								
	VVR									
	WWR									
	XXR									
	YYR									
	ZZR									

Examiner	Date Considered:
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.	



PTO RECEIPT Attorney Docket: 081468-0308101

Atty: John P. Darling/R. Parra

Appln. No: TO BE ASSIGNED Date: February 6, 2004

Inventor(s): PAULUS CORNELIS DUINEVELD ET AL

Title: Lithographic Apparatus and Device Manufacturing Method

- ☐ Preliminary Amendment ☒ Application Data Sheet
☐ Appendix ☒ Utility/Design/Provisional
☒ 16 No. of Pages Application (Spec + Claim(s) + Abstract)
☐ No. of Pages Separate Power of Attorney
☒ 33 No. of Numbered Claims Only
☐ Declaration (___ of pages)
☐ Assignment ☐ Cover Sheet
☐ No. of Priority Documents
☒ 3 No. of Sheets of Drawings (Fig(s) 1-5)
☒ IDS ☐ Appendix for Cited Appl(s) ☐ Foreign Search Report/OA
☒ PTO-1449 ☒ Cited Documents ☐ Nonpublication Request
\$ Total Fee Charged to Deposit Account 033975
Other: _____



PTO RECEIPT Attorney Docket: 081468-0308101

Atty: John P. Darling/R. Parra

Appln. No: TO BE ASSIGNED Date: February 6, 2004

Inventor(s): PAULUS CORNELIS DUINEVELD ET AL

Title: Lithographic Apparatus and Device Manufacturing Method

- ☐ Preliminary Amendment ☒ Application Data Sheet
☐ Appendix ☒ Utility/Design/Provisional
☒ 16 No. of Pages Application (Spec + Claim(s) + Abstract)
☐ No. of Pages Separate Power of Attorney
☒ 33 No. of Numbered Claims Only
☐ Declaration (___ of pages)
☐ Assignment ☐ Cover Sheet
☐ No. of Priority Documents
☒ 3 No. of Sheets of Drawings (Fig(s) 1-5)
☒ IDS ☐ Appendix for Cited Appl(s) ☐ Foreign Search Report/OA
☒ PTO-1449 ☒ Cited Documents ☐ Nonpublication Request
\$ Total Fee Charged to Deposit Account 033975
Other: _____

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